

# PRODUCT INFORMATION PACKET

rotor nl®

Model No: 6RN180L06E36U463021

Catalog No: 6RN180L06E36U46@3021

18.50 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 1000 rpm, D400/Y690V 50Hz,  
180L Frame B5, IC411



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### Nameplate Specifications

Output HP	<b>25 Hp</b>	Output KW	<b>18.5 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>D400/Y690 V</b>
Current	<b>38.00 A</b>	Speed	<b>975 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>91.7 %</b>	Power Factor	<b>0.77</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>180L</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6310-2Z/C3WT (-40°C/+160°C)</b>	Opp Drive End Bearing Size	<b>6310-2Z/C3WT (-40°C/+160°C)</b>
UL	<b>No</b>	CSA	<b>Optional</b>
CE	<b>Yes</b>	IP Code	<b>IP55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE3</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>6</b>	Rotation	<b>Clockwise Shaft End</b>
Mounting	<b>B5</b>	Motor Orientation	<b>Any</b>
Frame Material	<b>Cast iron</b>	Shaft Type	<b>Keyed</b>
Outline Drawing	<b>6RN180L06E36U463021</b>		

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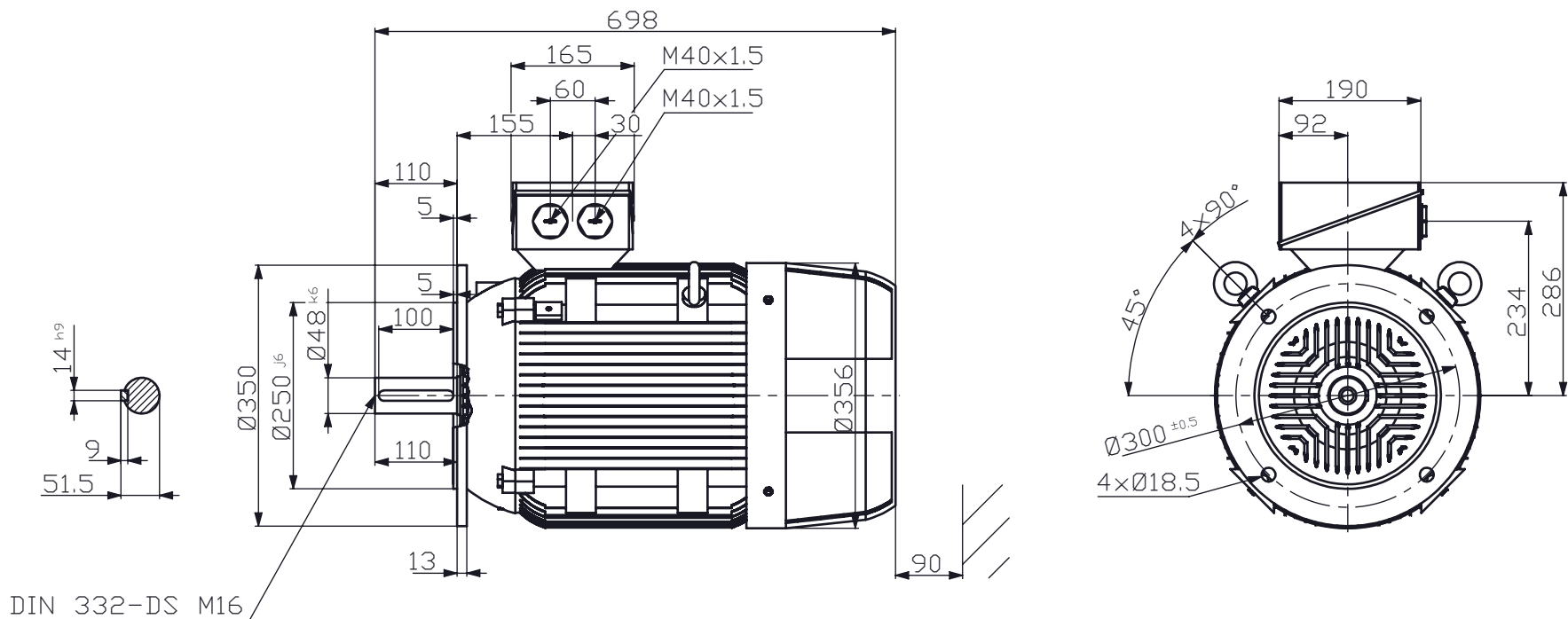
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5

A

B

C



## REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED



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MOTORTYPE: 6RN180L06E36  
MOUNTING: IM3041  
PROTECTION:  
COOLING: IC411  
REMARKS:

DIMENSIONS: MM

SCALE: 1:9

TITLE: Outline drawing

SPECIAL:

ART. NR.:

REVISION:

PAPER SIZE: A4

PAGE 1 OF 1

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DATE:



Datasheet



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**Model No.** 6-Pole cage motor 6RN 180L 18,5kW D400V 50Hz IM3021-FF300

U (V)	Δ / Y Conn	f [Hz]	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load			PF at __load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>R</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	D	50	18,5	24,8	38	975	180	IE3	91,7			0,77			6,90	2,58	3,30
690	Y				22												
460	D	60	22	30	37,5	1175	178	IE3	93,0	93,5	93,4	0,79	0,73	0,62	6,90	2,40	3,10

Motor type	<b>6RN180L06E36</b>
Enclosure	<b>Totally Enclosed Fan Cooling</b>
Frame Material	<b>Cast iron</b>
Frame size	<b>180L</b>
Duty	<b>S1</b>
Voltage	<b>400 V</b>
Frequency	<b>50 Hz</b>
Power output	<b>18,5 kW</b>
Insulation class	<b>F</b>
Ambient temperature	<b>-20 till 40 °C</b>
Temperature rise	<b>temp.rise acc. B (80K)</b>
Temperature rise winding	<b>67 K</b>
Temperature rise surface	<b>35 K</b>
Altitude above sea level	<b>1000 mtr</b>
Hazardous area classification	<b>Safe area</b>

Rotor type	<b>Cage motor</b>
Bearing type	<b>6310-2Z/C3WT</b>
Type of grease	<b>Unirex N3</b>
Phase resistance at 20°C	<b>0,3737 Ohm</b>
Country of origin	<b>CZ</b>

Voltage/Freq	Locked rotor Torque [nom] [%]	Starting current [% nom]	Pull-up Torque [% nom]	Breakdown Torque [% nom]	No-load Current [A]
@ D 400V 50Hz	258%	689%	230%	330%	19,3 A
@ D 460V 60Hz	240%	688%	220%	310%	17,6 A

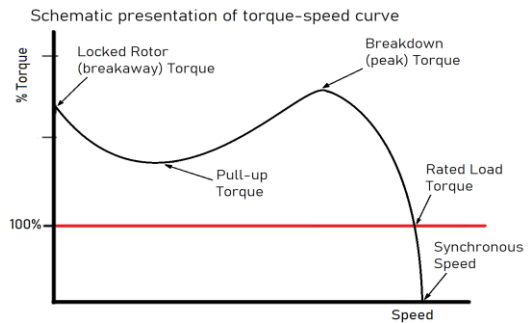
**NOTE**

All performance values at rated voltage and frequency.  
 All performance parameters are subjected to standard tolerance as per IEC 60034-1  
 Voltage, Frequency are as per IEC60034-1  
 Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency	Europe	Global IEC
Standards	EN-IEC: 60034-30	IEC: 60034-30

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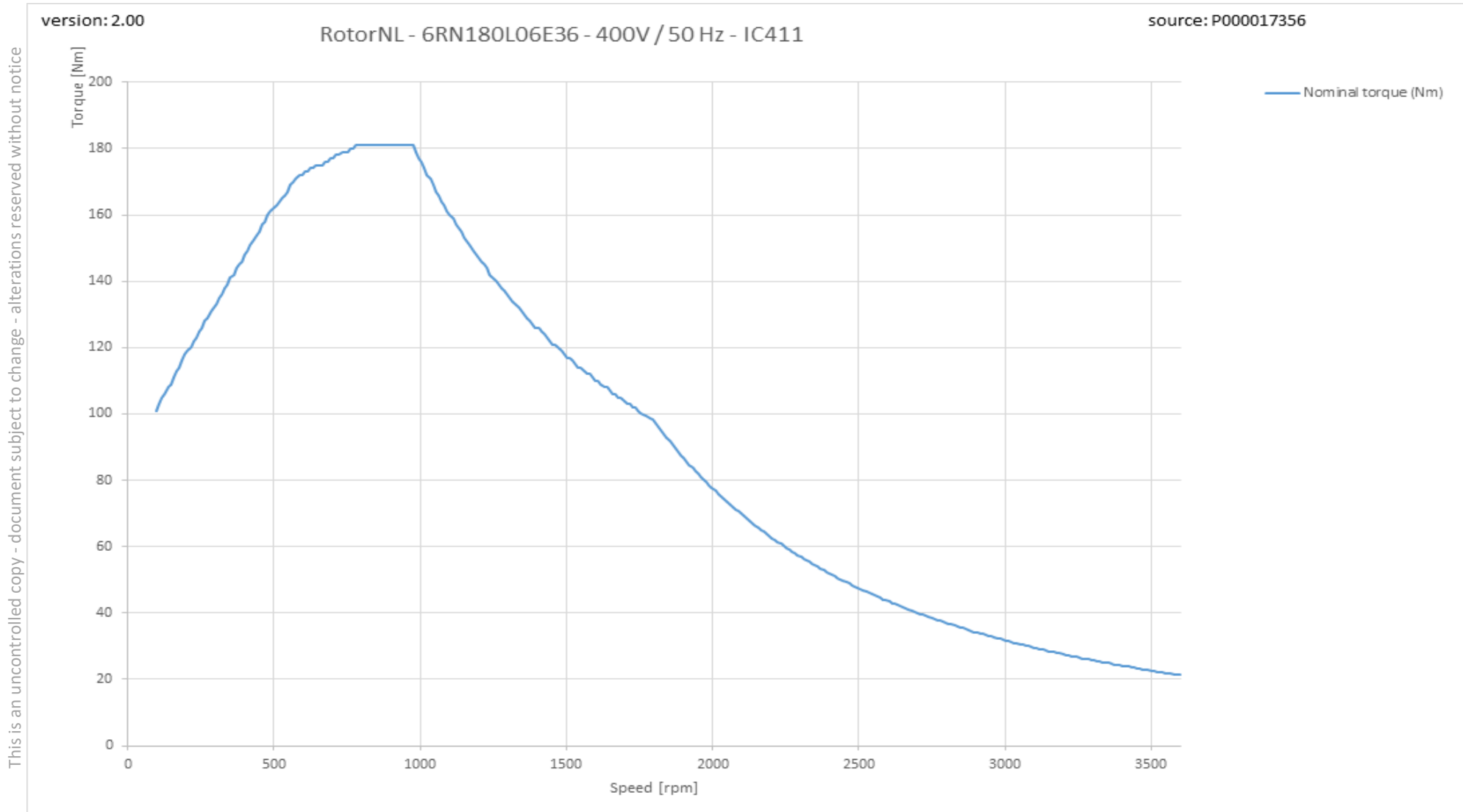
Degree of protection	<b>IP55</b>
Mounting type	<b>IM3021-FF300</b>
Cooling method	<b>IC411</b>
Motor weight - approx.	<b>191 kg</b>
Gross weight - approx.	<b>197 kg</b>
Motor inertia	<b>0,2470 kgm<sup>2</sup></b>
Vibration level	<b>according IEC60034-14</b>
Direction of rotation	<b>cw / ccw</b>



6RN180L06E36 6-pole 18,50kW D/Y 400/690V 50Hz S1 IC411 IE3

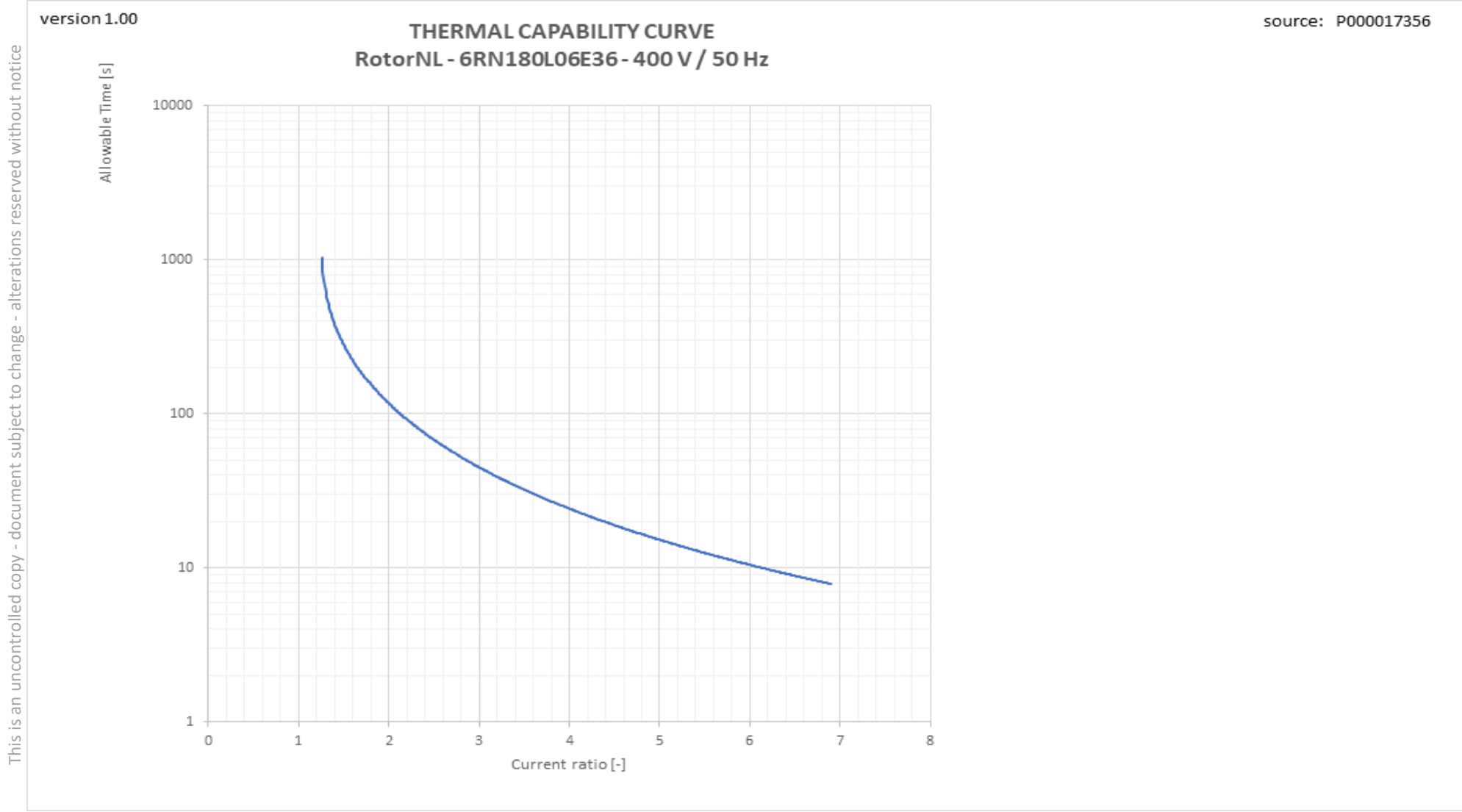


Torque versus Speed curve with variable frequency drive



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Therm\_VSD graph



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Tn graph

